

# Colorado's Aquatic Nuisance Species Program



ZEBRA MUSSEL



QUAGGA MUSSEL





## State ANS Act (SB 08-226)

- Passed in May 2008
- Formalized State ANS Program
- Illegal to possess, import, export, ship, transport, release, plant, place, or cause an ANS to be released.
- Authority to “Agents” & Qualified Peace Officers to inspect, decontaminate and quarantine watercraft for ANS.
- Created an ANS Fund which provide for initial program funding, plus annual funding beginning in FY10 for both the CDOW (\$1.3M) and State Parks (\$2.7M) using Severance Tax (Tier II).
- Annual program expenditures of \$4.4-4.8M, plus approximately \$800K of direct and in-kind contributions from other agencies.

# Mission

To protect wildlife, recreation, natural resources, infrastructure and the economy by preventing the introduction of zebra & quagga mussels, and other invasive species, by containing current infestations and stopping the spread into new waters.





# Why Inspect Boats for ANS?

- ZQM are transported overland on recreational boats
- ZQM are the most invasive and costly nuisance species in North America
- ZQM are the biggest ecological and financial threat to western states
- By inspecting boats, we are managing the largest vector of spread
- Inspections can prevent introductions to new watersheds
- Inspecting boats prevent the introduction of other ANS
- Conducting about 500,000 inspections annually at about 70 locations



# ZQM Positive Waters in CO

- Pueblo Reservoir State Park tested positive for zebra or quagga mussel larvae (veligers) in 2007, 2008, 2009 and 2011. No detections from 2012-2016.
- Granby Reservoir, Grand Lake, Shadow Mountain Reservoir, Willow Creek Reservoir, Tarryall Reservoir and Jumbo Reservoir all tested positive for one zebra or quagga mussel veliger in 2008. There have been no verified detections at any of these waters since 2008.
- Colorado de-listed Granby, Grand Lake, Shadow Mountain, Willow Creek, Tarryall, and Jumbo in January 2014.
- Colorado de-listed Pueblo Reservoir in January 2017, and thus the state became entirely negative for ZQM.
- No adult mussels have ever been detected in Colorado.
- COLORADO IS NOW THE ONLY STATE IN THE U.S. TO HAVE GONE FROM A POSITIVE MUSSEL STATE TO A NEGATIVE STATE!!!.....but we need to keep it that way...

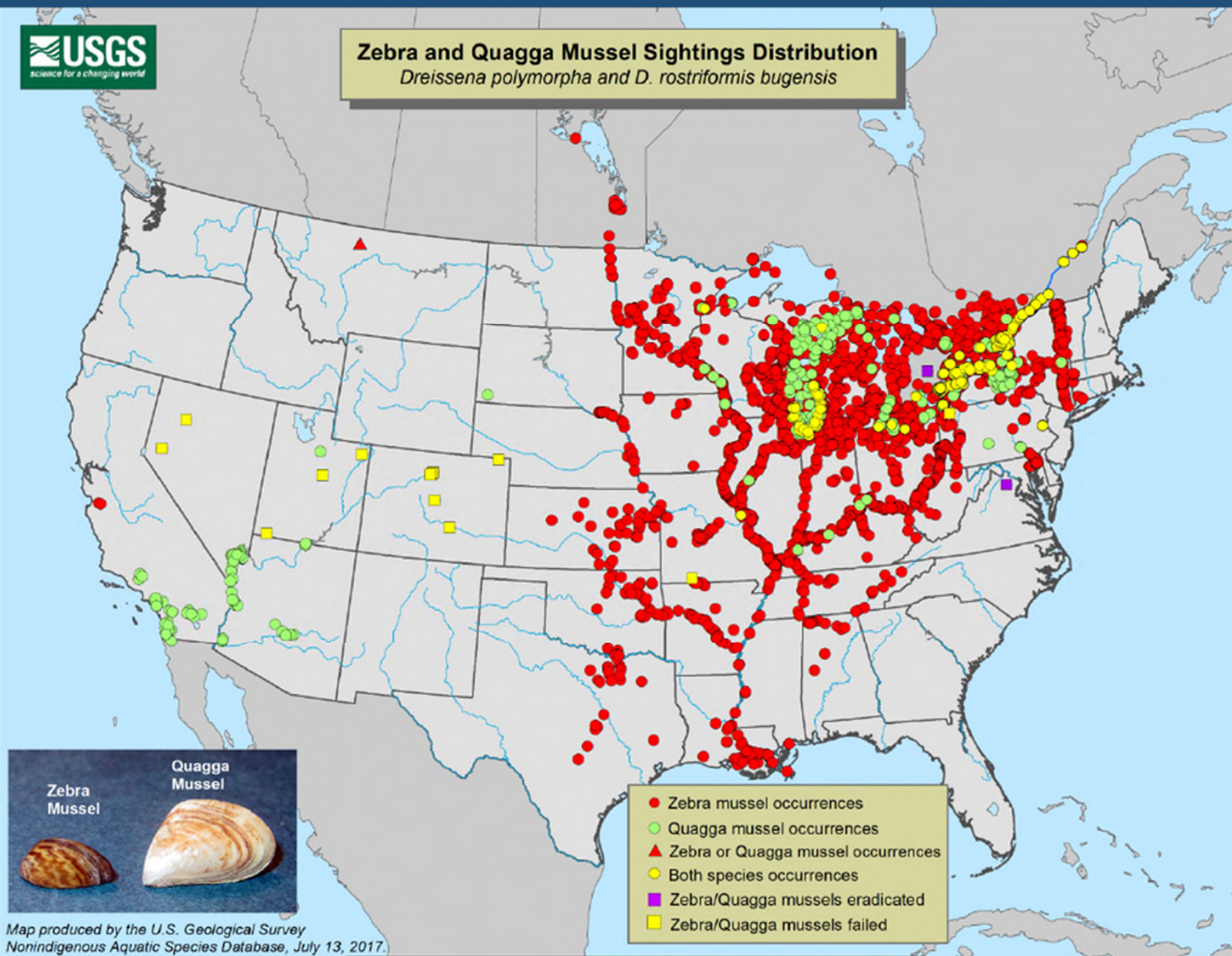




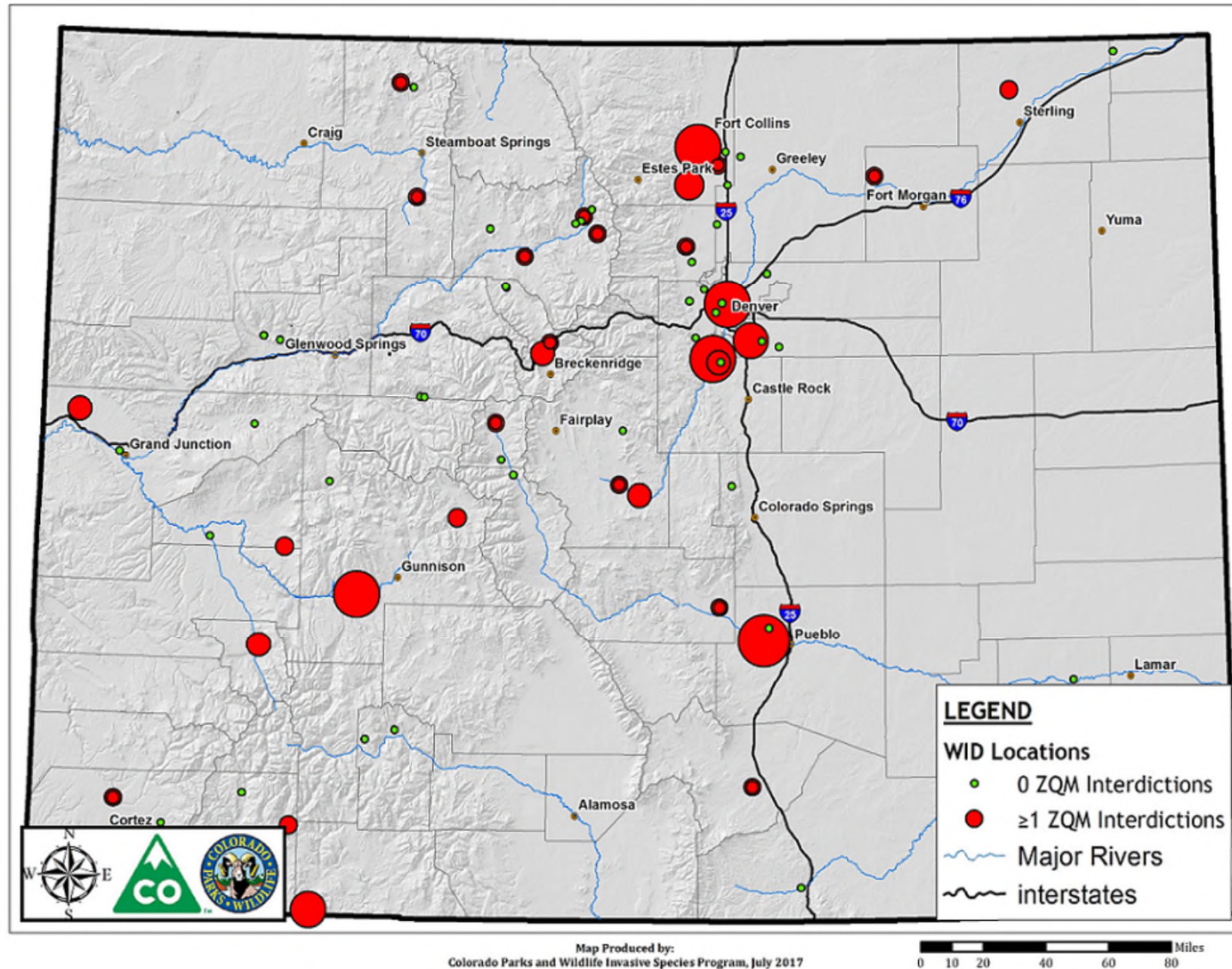


### Zebra and Quagga Mussel Sightings Distribution

*Dreissena polymorpha* and *D. rostriformis bugensis*

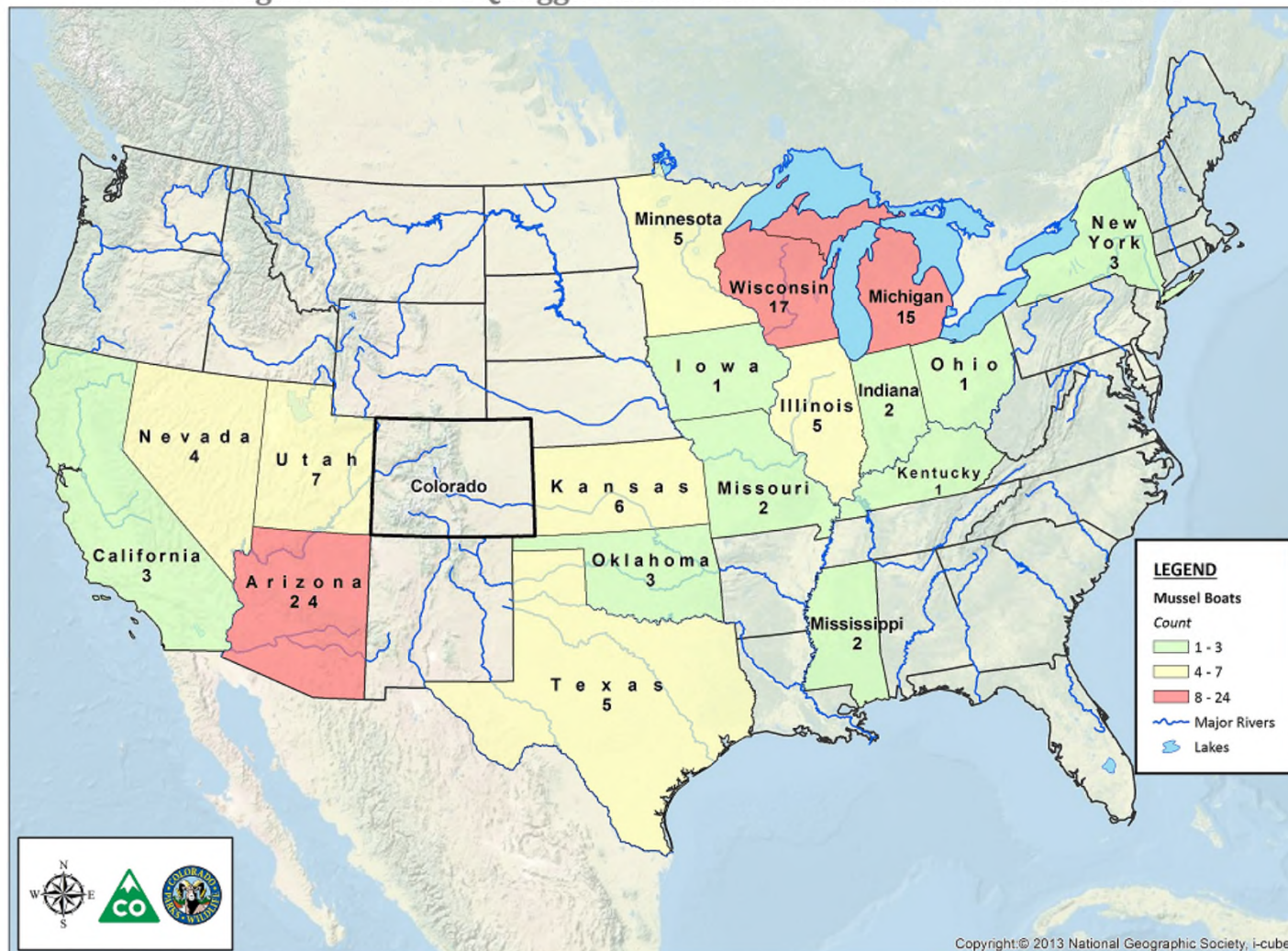


## Zebra & Quagga Mussel Positive Interdiction Sites in Colorado





## Boat Origin for Zebra & Quagga Mussel Positive Interdictions in Colorado



Map Produced by: Colorado Parks and Wildlife Invasive Species Program, July 2017

0 100 200 300 400 Miles





# Cost of Invasion



- **WATER TREATMENT:**

- Great Lakes water users with intake structures - monitoring and control of mussels cost \$120 million from 1989–1994.
- The Metropolitan Water District has spent \$30 million (2007-2012) to fight quagga mussels and might be spending \$8 million to \$10 million a year on it into the future.

- **POWER GENERATION:**

- Throughout 35 U.S. states and three Canadian provinces surveyed in the Great Lakes Region, 339 facilities reported expenses relating to zebra mussel impacts totaling \$83 million in 1989–1995.
- \$1 million per year Hoover Dam annual budget for quagga mussel control.

- **INDUSTRIAL FACILITIES:**

- 142 industrial facilities in the Great Lakes, direct operating cost: monitoring and control of zebra mussels \$149 million spent between 1989–1994.





# Current Funding Status

- Loss of Tier 2 Severance Tax Funding in May of 2016
- ANS fund reserve was spent to cover Summer 2016 season
- Large stakeholder process during Fall and Winter of 2016-150 stakeholders involved
- \$1.3 million of contributions from Colorado Water Providers, local governments, and Federal Agencies
- Additional funding from SB 259 provided \$3.6 million for ANS operations
  - Provided funding for 2017 boating season.



# Possible Path Forward

- Current funding situation is not sustainable.
- Options being considered to provide a new funding source.
  - \$25 surcharge on in state registered boats-\$2+ million new revenue
  - Create a fee for out of state boaters to boat in Colorado-\$500,000+
  - Continuation of use of Tier 2 Severance Tax funding.
- Other additions to program.
  - Increase penalties and fines for noncompliance with ANS statutes
    - Current fine is \$50 and is not a deterrent.
  - Ability to recover costs of decontamination of positive boats
  - Combination of separate Parks and Wildlife funds to create one CPW fund

